# *Route 3 Corridor Access Management Plan*

## Bedford, New Hampshire

Prepared for
Town of Bedford
Bedford, New Hampshire

Prepared by
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## Introduction

Back in the early 1980's the Southern New Hampshire Planning Commission prepared the U.S. Route 3 Corridor Study [1] for the Town of Bedford. The study corridor extended from Manchester to Merrimack and, as described in the report, consisted of three corridor segments. The Upper Corridor extended from the Manchester city line southward to the Route 101 interchange. The Middle Corridor extended from the Route 101 interchange southward to the bridge over the F.E. Everett Turnpike. And the Lower Corridor extended southward from the F.E. Everett Turnpike to the Merrimack town line.

The purpose of the study was to address short-term deficiencies as well as to establish a long-term vision for the build-out of the corridor. In addition to defining the long-term corridor cross section, which for the most part consisted of two travel lanes in each direction with exclusive left-turn lanes provided at major intersections, the study introduced the concept of using service roads to access back parcels and to better control access along the corridor. Since the initial study, the Town has continued to develop this concept of controlling access along the corridor. In fact, soon after the initial study was developed, the Town established a defined access management plan for the corridor.

This report documents the access management plan and describes the various access management elements that have been incorporated into the plan. Also included in the plan are the locations of future connector roadways that can be constructed, in part or in total, by private developers as a condition of approval at the time a site plan is submitted to the Planning Board. In addition the document provides a Memorandum of Understanding, which solidifies the mutual commitment of the NHDOT and the Town of Bedford to access management along this important corridor.

## What is Access Management?

"Access management is the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway."[2] Along a busy commercial corridor such as Route 3, a well conceived access management plan serves to improve the efficient movement of traffic while enhancing the safe and efficient access to and from abutting properties. Some specific benefits of access management include:

[1] U.S. Route 3 Corridor Study: Southern New Hampshire Planning Commission, April, 1983
[2] Access Management Manual; Transportation Research Board, Washington, D.C. 2003

- Safer and more efficient access to properties,
- Fewer and less severe automobile crashes,
- Fewer auto/pedestrian conflicts,
- Less congestion,
- Reduced travel delays,
- Reduced fuel consumption,
- Increased and preserved traffic capacity, and
- Enhanced corridor aesthetics.

As much as anything, access management balances mobility and access, so as to improve the efficient movement of traffic while enhancing safe and efficient access to and from abutting properties. To be effective, access management requires that land use planners and roadway designers work together. The Town of Bedford recognizes the importance of this concept and has been doing this for years.

For the most part, the Route 3 Access Management Plan calls for two 12′ travel lanes in each direction separated by a raised center median. A five-foot wide shoulder/bike lane would be provided along each side of the roadway while a five-foot wide sidewalk would be provided along the east side of the corridor. Median breaks, exclusive left-turn lanes, and traffic signal control would be provided at major intersections along the corridor. The plan calls for traffic signal control at 13 intersections. Note that along the more established northern segment of the corridor (north of Kilton Road) the plan does not call for the placement of raised median. However, the plan for this northern segment does include other access management actions such as the parcel to parcel connector roads.

The primary elements of the access management plan include: well-spaced traffic signals, a raised center median (with the exception of north of Kilton Road), and connector roadways. The primary purpose of the plan is to safely and efficiently accommodate most, if not all, left-turn movements at signalized intersections. The overall corridor access management plan is shown in Figure 1. The recommended corridor cross section is shown in Figure 2.

The following section describes each of these three key access management elements.

## Access Management Plan Elements

There are many access management techniques that can be used to improve the efficient movement of traffic while enhancing the safe and efficient

access to abutting properties. However, as indicated, the key access management elements that are incorporated into the Route 3 plan are well spaced traffic signals, a raised center median, and connector roadways. Each of these elements is described briefly as follows.

## Traffic Signal Spacing and Coordination

With the planned raised center median, most left-turn movements will need to be accommodated at well-spaced traffic signals. The spacing of signalized intersections can have a dramatic influence on the safe and efficient movement of traffic along a corridor. Management of signal spacing includes planning for the frequency of signals, as well as the uniformity of their spacing.

To attain the maximum efficiency from a coordinated traffic signal system, traffic signals should be spaced approximately one-quarter mile and no more than one-half a mile apart. The plan calls for 13 traffic signals within the approximately 4-mile corridor or approximately three signals per mile with the maximum spacing being one-half a mile. Nine of the 13 signals are currently in place. The four traffic signals that have yet to be installed include the south Hawthorne Drive intersection, the south Technology Drive intersection and the two traffic signals that are to be installed by the NHDOT at the Airport Access Interchange.

The traffic signal controlled intersections are as follows:

- Colby Court
- Palomino Lane
- Kilton Road
- Route 101 Westbound Ramps
- Meetinghouse Road
- Back River Road
- Target/Lowes
- Hawthorne Drive North
- Hawthorne Drive South
- Technology Drive North
- Technology Drive South
- Airport Access Interchange Eastbound Ramps
- Airport Access Interchange Westbound Ramps

## Raised Center Median

A raised center median can be a very effective access management tool because it not only separates directional traffic flow, but more importantly it eliminates uncontrolled left-turn movements. Left-turn movements

adversely impact traffic flow and are far more likely to be involved in vehicular crashes than right-turn movements. The placement of a raised center median has the effect of restricting driveway and side street turning movements to right-turn in and right-turn out.

The plan calls for the full raised center median along the segment from the Back River Road intersection southward to the Airport Access Interchange. Median openings and exclusive left-turn lanes would be provided at the major signalized intersections along this section of the corridor. The northern segment (north of Kilton Road) would not include a raised center median, while the middle segment (from Kilton Road to Back River Road) would include raised median at the signalized intersections, but would provide some breaks in the center median that would provide for left-turn movements.

### Connector Roadways

Having established the locations of the signalized intersections, which given the placement of the center raised median will serve to accommodate most of the corridor's left-turn movements, connector roadways can be used to provide numerous properties access to the signalized intersections.

The Town has been obtaining dedicated easements and right-of-way over the years as development proposals have come before the Planning Board. In fact some development projects have constructed connector roadways that provide access to other parcels. The various future connections, dedicated right-of-way and existing connections that will need to be maintained are depicted in Figure 1.

## Memorandum of Understanding

As Route 3 is a state controlled roadway, it is important that the State and the Town of Bedford coordinate and communicate on the granting of access permits that are consistent with the goals and objectives of the Route 3 Access Management Plan. For this reason, the following pages provide a Memorandum of Understanding (MOU), which outlines the agreement between the New Hampshire Department of Transportation (NHDOT) and the Town of Bedford. Once reviewed and approved, the MOU will need to be signed by both parties.

**MEMORANDUM OF UNDERSTANDING**
**FOR**
**COORDINATING HIGHWAY ACCESS MANAGEMENT**

**BETWEEN**

**NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION**
**AND**
**TOWN OF BEDFORD, NEW HAMPSHIRE**

This Memorandum of Understanding is made between the State of New Hampshire, Department of Transportation (hereinafter referred to as "DEPARTMENT") and the Town of Bedford (hereinafter referred to as "TOWN" and entered into on _____.

The Parties to this Understanding witness that:

WHEREAS, the DEPARTMENT has the statutory responsibility and permitting authority, under RSA 236, to issue driveway access permits on state highways; and

WHEREAS, the TOWN, has the ***statutory authority, pursuant to RSA 237:13, V, for highways under their jurisdiction to issue driveway and access permits, where the Planning Board regulates the subdivision of land under RSA 674:34; additionally under RSA 674, the Town may regulate the use and site development of property adjoining the highway***; and

WHEREAS, the DEPARTMENT and the TOWN mutually recognize the continuing necessity to plan and coordinate future land use and access to highways, in order to preserve highway capacity and public safety, and;

WHEREAS the DEPARTMENT and the TOWN mutually recognize and agree that the preserving the safety and maximizing the capacity of state highways is in the public interest,

THEREFORE, BE IT RESOLVED, that the following provisions of this Memorandum of Understanding are agreeable to all parties;

## Article I: Statement of Purpose

The DEPARTMENT and TOWN enter into this Understanding to improve access management of state highways within its boundaries. For the purposes of this Understanding, access management shall include coordination in the planning, design, control, and determination of access points to facilities, and in the issuance of driveway access permits.

**Article II: Scope of Understanding:**

The provisions of this Understanding shall apply to all state highways or segments of state highways located within the TOWN as identified in the Route 3 Access Management Plan and agreed upon by the Town and the Department (List as follows:)

Route 3 from the Manchester city line southward to the Merrimack town line.

**Article III: Joint Responsibilities**

1. It shall be the joint responsibilities of the DEPARTMENT and the TOWN to develop and adopt agreed upon procedures for the coordination between site plan approvals and driveway access permits.

2. The TOWN and the DEPARTMENT may establish an Access Management Technical Guidance Committee for the purpose of coordinating the concurrent review of site plans and driveway access permit applications to ensure their conformance with state and local access management plans and/or standards.

**Article IV: Responsibilities of the TOWN**

1. Access management standards developed, adopted, and/or enforced by a TOWN shall not conflict with best practices for access management where a state highway is involved. These standards may take the form of zoning ordinances, site plan review, subdivision regulations and requirements, roadway construction standards, or a combination of these, and shall be applied to all future development and redevelopment of land accessing state highways. Such standards shall be developed in consultation with the DEPARTMENT and Regional Planning Commissions. Copies of all such standards and subsequent amendments thereto, shall be provided to the DEPARTMENT to be kept on file at the Central and District Offices.

2. Where appropriate and necessary as determined by the TOWN, the TOWN may develop, in cooperation or consultation with the DEPARTMENT, adopt, and amend site or parcel-specific access management plans for specific highway corridors or segments. Such plans shall define the number, as well as, general location and design of future access locations to be permitted on specific parcels or sites. The plans and any subsequent amendments thereto, shall be forwarded to the DEPARTMENT to be kept on file at the Central and District Offices. The number, location, and design of access points shall be consistent with the Department's "Policy for the Permitting of Driveways and Other Accesses to the State Highway System".

3. In the event that waivers or variances to the adopted access management standards or plans are proposed, the TOWN Planning Department shall inform the DEPARTMENT of such waivers or variances prior to local approval of the plans. Notice will be made prior to the issuance of the local approval and with sufficient time to allow for comment from and consultation with the DEPARTMENT.

4. The TOWN Planning Department shall notify the DEPARTMENT District Engineer upon receipt of any development proposal or change of use that will require a state driveway access permit and solicit input regarding access design.

5. The TOWN shall require that driveway access(es), including type, design, number, and location, be permitted only in accordance with its adopted access management standards and any applicable site-specific access plans.

6. The TOWN shall coordinate and cooperate with the Department throughout the development/driveway permitting process (including approval of access development), as described in the procedures set forth in Article III Section 1.

## Article V: Responsibilities of the DEPARTMENT

1. The DEPARTMENT's Design Bureaus and District Engineer will provide information, technical assistance, and advice to the TOWN in the development of local access management standards and site or parcel level access management plans.

2. The DEPARTMENT District Engineer shall notify the TOWN Planning Department upon receipt of any application for driveway access permits and scheduled scoping meetings by transmitting a copy of such application or meeting notice, along with a request for comments. On Department sponsored projects, the Department's Project Manager will bear the responsibility to notify the TOWN Planning Department of the Department's intentions.

3. The DEPARTMENT District Engineer shall coordinate and cooperate with the municipality throughout the development/driveway permitting process (including issuance of drive permits), as described in the procedures set forth in Article III Section 1.

## Article VI: Effective Date and Amendments to Memorandum of Understanding

1. This Understanding shall become effective upon execution by the DEPARTMENT and the TOWN and shall remain in force until terminated under provisions of Article VII, or until superseded by a new Understanding.

2. This Understanding may be amended from as facts or circumstances warrant or as may be required by state or federal laws, administrative regulations, or other orders or guidelines having the full force and effect of law.

## Article VII: Termination of Understanding

The DEPARTMENT or TOWN may terminate this Understanding by giving ninety (90) day written notice of such termination to the other party.

IN WITNESS WHEREOF, the parties have hereto caused this Understanding to be executed by their proper officers and representatives.

*FOR THE TOWN OF BEDFORD, NEW HAMPSHIRE:*

*Planning Board*

**by**_____ **Date**_____
**Chair**

*Town Council*

**by**_____ **Date**_____
**Chair**

*FOR STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION:*

**by**_____ **Date**_____
**District Engineer**

**by**_____ **Date**_____
**Commissioner**

HERRITAGE TRAIL

DEDICATED R.O.W.

FUTURE CONNECTION

NHDOT AIRPORT ACCESS INTERCHANGE PROJECT

Moores Crossing Rd

Commerce Pk North

Technology Dr

Iron Horse Dr

Somerville Dr

Hawthorne Dr

South River Rd

Hawthorne Dr North

Sunset Ln

Cedarwood Dr

Commerce Dr.

Autumn Ln

Harvey Rd

Access Rd

Station Rd

MATCH TO A-A

PRESERVE EXISTING CONNECTION

Eastman St

Wathen Rd

Beaudoin St

Washington Pl

Park Dr

Hull Rd

Palomino Ln

Ridgewood Rd

Atwood Dr

Meetinghouse Rd

F.E. Everett Tpk

Executive Park

Club Acre Ln

Back River Rd

Agusta National Cir

St Sndrews Dr

Muirfield Rd

## Legend:

- Existing R.O.W.
- Dedicated R.O.W.
- Existing Connection
- Future Connection
- (S) Existing Signal
- (S) Future Signal

N

0 400 800 Feet

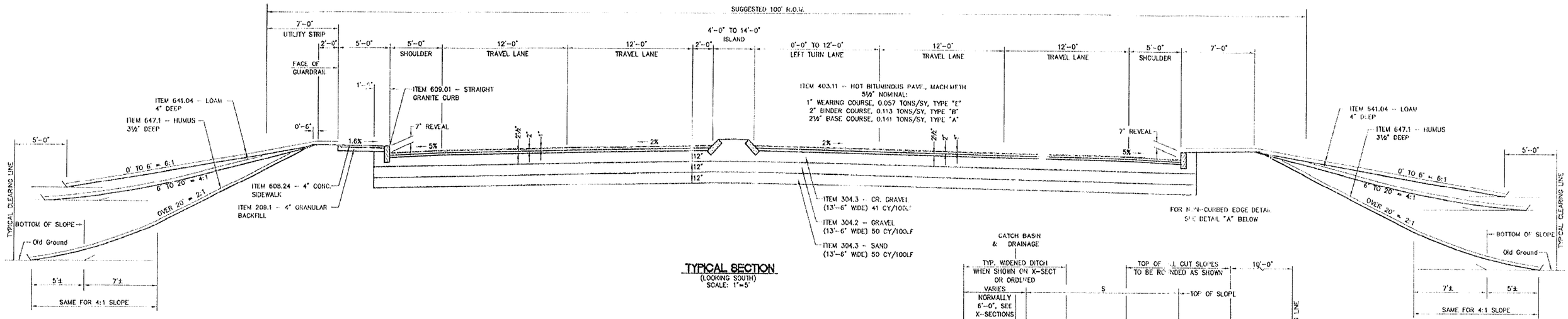
TOWN OF BEDFORD 1750 NEW HAMPSHIRE

*Vanasse Hangen Brustlin, Inc.*

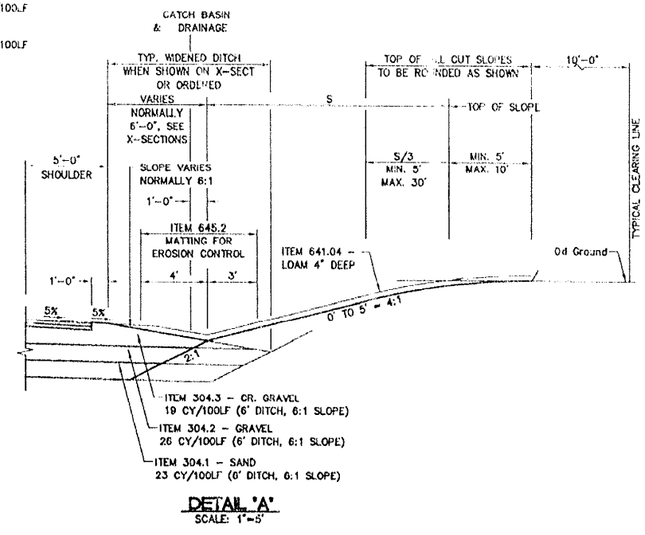
Figure 1

Bedford Route 3
Access Management Plan

Date Created:8/27/2007 ...\planset51836_Route3-11x17.cgn




**TYPICAL SECTION**
(LOOKING SOUTH)
SCALE: 1"=5'




**DETAIL "A"**
SCALE: 1"=5'

TOWN OF BEDFORD NEW HAMPSHIRE 1750

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Figure 2

Bedford Route 3
Access Management Plan